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December 12, 2011

Manucher Alemi, Ph.D., P.E.
Chief, Water Use and Efficiency Branch
Division of Statewide Integrated Water Management
Department of Water Resources
901 P Street
Sacramento, CA 95814

Re: Quantification of Agricultural Water Use Efficiency

Dear Manucher,

Thank you for the opportunity to comment on the November 15, 2011 version of the Draft Report to the Legislature, Quantifying the Efficiency of Agricultural Water Use. The process of development of this report has provided an excellent opportunity to examine common methods as well as misconceptions over what constitutes a reliable measure of agricultural water use efficiency.

Section 3 of the report most accurately represents a science-based method for quantifying agricultural water use efficiency. Defining agronomic and environmental needs as well as evapotranspiration, recoverable and irrecoverable flows, provides the basis for assessing water use efficiency. The six methods described in Section 3.2 do a good job describing how different uses at different scales are best evaluated.

Section 4 is somewhat mislabeled as a "Productivity Approach" and purports to be an equally viable assessment option for quantifying water use efficiency. It is not. The alternatives in Section 4 fail to consider the many variables within economic and productivity assessments of agricultural commodities, and cannot be reliably used to quantify water use efficiency. DWR correctly lists economics and production volume as "indicators" but does not adequately separate them from the appropriate Water Management Approach in Section 3. Their inclusion in the document as an approach to quantification fails to accurately represent their proper contributions in agricultural productivity conversations.

The report should list Section 3 as the sole methodology to quantification of water use efficiency and it should represent DWR's sole recommendation to the legislature on how quantification should be assessed. Section 4 should be more accurately titled "Indicators" as opposed to an "approach" and moved to a section of the report devoted to supporting information.

Manucher Alemi, Ph.D., P.E.
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The attached academic report, "Agricultural Water Use in California: A 2011 Update" by the Center for Irrigation Technology at California State University, Fresno provides additional discussion and warns against use of economics or production volume as methods to quantify water use efficiency. Many different factors are identified in the report that potentially affect the value or volume of a crop grown beyond the efficiency of the irrigation water itself. This report, which is the product of one of California's most authoritative academic institutions on agriculture and water, discusses many pertinent water use efficiency considerations. The CIT report would be a valuable addendum to DWR's report to the legislature.

Thank you again for the opportunity to comment. We appreciate the hard work and dedication of the Department to include diverse interests and comments in order to produce this report to the legislature.

Sincerely,



Mike Wade
Executive Director

cc: CFWC Board of Directors